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## **Extra Deep Planting A Killer of Trees, Shrubs**

I recently visited a home landscape where the owner told me that everything that he had planted was dying. And, upon examination, I found him to be correct. There were young oak trees, gardenias and junipers that were either dead or in various stages of decline.

The diagnosis was easy - because I see the problem so often. Acceptance of the cause of death however, was not so easy.

The cause was excessively deep planting. It's a slow but sure killer of newly transplanted ornamental plants including trees, shrubs, vines and even some flowers and vegetables.

There are two different, but related ways that extra deep planting can cause the death of landscape plants - root suffocation and basal stem rot. Suffocation occurs because the root systems of most plants require atmospheric oxygen. Whether grown in a nursery pot or in the ground prior to being transplanted, roots naturally adjust their depth in order to obtain optimum oxygen and moisture.

The depth at which most plants are rooted is surprisingly shallow. Commonly grown trees and shrubs such as azaleas, boxwoods, blueberries, dogwoods and magnolias have most roots growing near the soil surface. If planted too deeply, plunging the root ball deeper than it was previously, suffocation begins almost immediately. Death of all roots and tops occurs slowly over time.

A plant dying from root suffocation can sometimes be confusing to anyone who attempts to diagnose the problem. Because the plant is in such a weakened state, symptoms of nutrient deficiency and increased insect or disease problems are often seen. In the case of excessively deep planting, these are usually only secondary symptoms brought on by the weakened state of the plant, instead of the actual cause.

Basal stem rot is the second way that planting too deeply can kill a plant. The

stem, or trunk, from earliest growth is made up of different tissue than root tissue. The stem or trunk is therefore adapted to exposure to air, not soil. If the plant is set too deep, then soil is suddenly in direct contact with what was previously above ground tissue. A slow rot often begins to occur under such conditions, and as it progresses the decay eventually eats its way through the vascular tissues beneath the bark.

The vascular tissue just beneath the bark of broadleaf plants is known as the phloem tissue and its function is to transport manufactured food from the leaves back down to the root system. If basal stem rot from excessively deep planting takes its toll, death is usually slow because it results in root starvation.

Death of plants from excessively deep planting can be easily avoided. First, when digging a planting hole, be generous with the width, but only dig it as deep as the root ball. Firm the bottom of the hole in order to drive out air pockets and prevent settling later. This can be done by lightly tamping the soil by hand prior to planting.

Remove each plant from its container and set it in the planting hole and check the depth. The top of the root ball should be even with the top of the ground, or slightly higher. Some gardeners even lay a yardstick or board across the planting hole next to the root ball in order to make a final adjustment. This is a good way to double check before backfilling around the root ball.

**Question of the Week:** What is the procedure for curing gourds? I have grown some in my garden and would like to keep them for use later.

**Answer:** Allow the gourds to remain on the vine until they have reached maximum maturity and have begun to dry. Harvest by leaving a short length of vine attached and hang them below a hot ceiling where they will slowly dry out.

Dried gourds can be cleaned, painted, shellacked or waxed. Well-treated gourds have many uses and can be made into bottles, bowls, ladles, bird houses, work baskets, pipes and even musical instruments.